



Do you paint small parts?

Would you like to improve this process in the following areas?

- **Meeting environmental compliance regulations** -- Reduce hazardous waste disposal and air emissions. Regulatory areas include RCRA and NESHAP.
- **Improving workers' safety and health** -- Reduce exposure to harmful paint fumes.
- **Increasing productivity** -- Reduce application time by 20%. Reduce painting frequency by creating a superior finish free of drips, runs or bubbles that is more durable and corrosion resistant than liquid paint.
- **Saving money** -- Reduce the need for air emission control equipment, procurement and disposal costs.



Powder Paint Spray Equipment

*Powder painting, or dry painting, eliminates VOCs, HAPs and solvents from painting processes. The paint is applied electrostatically by grounding the part and spraying electrically charged paint powder onto the workpiece. Surface preparation is required for optimal adhesion. The painted part is oven cured to melt the paint to the surface as the ground is maintained. Only oven-heatable workpieces are suitable for this painting method. The elimination of air emissions, wastes associated with air emission control equipment, and solvents makes powder painting a useful and cost-saving alternative. Some safety considerations must be addressed with this process, such as the fire hazard of fine particulates in the air and personal protective equipment requirements. Powder coating painting systems are being used successfully at several Navy installations. **This equipment is available through the Navy Pollution Prevention Equipment Program (PPEP).***

How can you achieve these improvements?

Implement Powder Paint Spray Equipment.

How does this equipment work?

Dry paint powder is electrostatically attracted to a workpiece. Parts require oven curing and result in a high quality coating.

How will this equipment save you money?

This equipment will reduce air emission control equipment requirements and waste solvent disposal. Equipment cost is approximately \$80,000. This equipment typically pays for itself in less than one year. For a complete economic analysis refer to the Joint Service P2 Opportunity Handbook Data Sheet 4-5.



Typical Process Flow Diagram



How can this technology eliminate or reduce pollution?

This technology can eliminate worker exposure to harmful paints and solvents. Implementation will result in the following pollution reductions:

- Reduce Use and Disposal of Solvents and Paints
- Reduce Air Emissions Related to Paint and Solvent Use
- Reduce the Use of Air Emission Control Equipment

Which shops can benefit most from this technology?

This technology can be used in processes that paint relatively small parts. Typical shops include:

- Automotive and Aircraft Small Parts Painting
- Ship Part Painting
- Support Equipment Small Parts Painting
- Facilities Painting

Take action: How can you implement this technology?

- **Activity Shop & Work Center Personnel.** Contact your Pollution Prevention Program Manager. The P2 Program Manager can provide more information and conduct a more detailed analysis, and may be able to provide this equipment at no cost to a Shop or Work Center.

- **Activity Pollution Prevention Manager.** Request this equipment through the Navy P2 Equipment Program (PPEP). Depending on the application, the Environmental Program Requirements Cookbook may contain project submission information for annual budget requests sent to your claimant.

- **For Additional Technical Information.** More information about this technology can be found on Joint Service P2 Opportunity Handbook Data Sheet Number 4-5 (Web: <http://www.nfesc.navy.mil/enviro/index.html>) or at the PPEP Book web site (<http://www.lakehurst.navy.mil/p2/listing.htm>).

Achieving Environmental Compliance Through Pollution Prevention

Every day the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by implementing pollution prevention technologies and methods to reduce compliance requirements. This Fact Sheet is one in a series designed to encourage activities to implement pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

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